

Operationalizing Mobile Computer-assisted TB Screening and Diagnosis With Wellness on Wheels (WoW) in Nigeria: Balancing Feasibility and Iterative Efficiency

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Abstract

Wellness on Wheels (WoW) provided mobile systematic TB screening of high-risk populations combining digital chest radiography with computer-aided automated interpretation and chronic cough screening to identify beneficiaries of GeneXpert MTB/RIF testing in communities and prisons. We piloted and refined approaches in phased evaluations, recalibrating CAD4TB thresholds adjusting to balance TB yield and feasibility. Iterative data monitoring of screening volumes, risk mix, number needed to screen (NNS), number needed to test (NNT), sample loss, TB treatment initiation and HIV testing are required. Given pre-selection of highest risk individuals via an accurate screening test, inability to collect or test samples impacts yield and cost-per-case. Linkage to care and treatment outcomes improved overtime.

Short conclusion: Mobile computer-assisted digital chest x-ray and chronic cough screening with GeneXpert MTB/RIF testing is feasible, acceptable, efficient and high-yield when highest risk groups are engaged, and operations evolve in response to monitoring data.

Full Text

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Figures

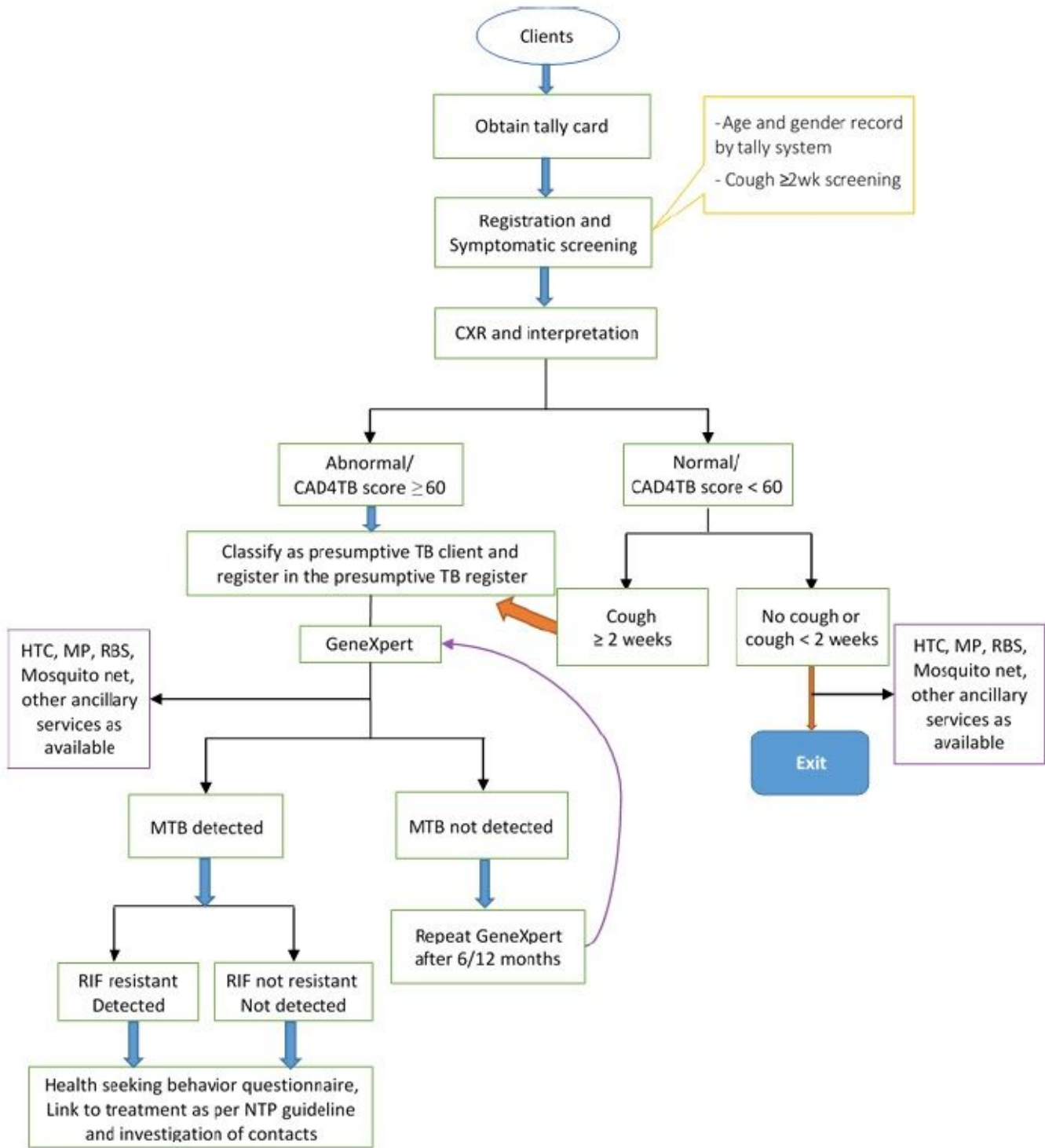


Figure 1

Client Flow in the WOW Project

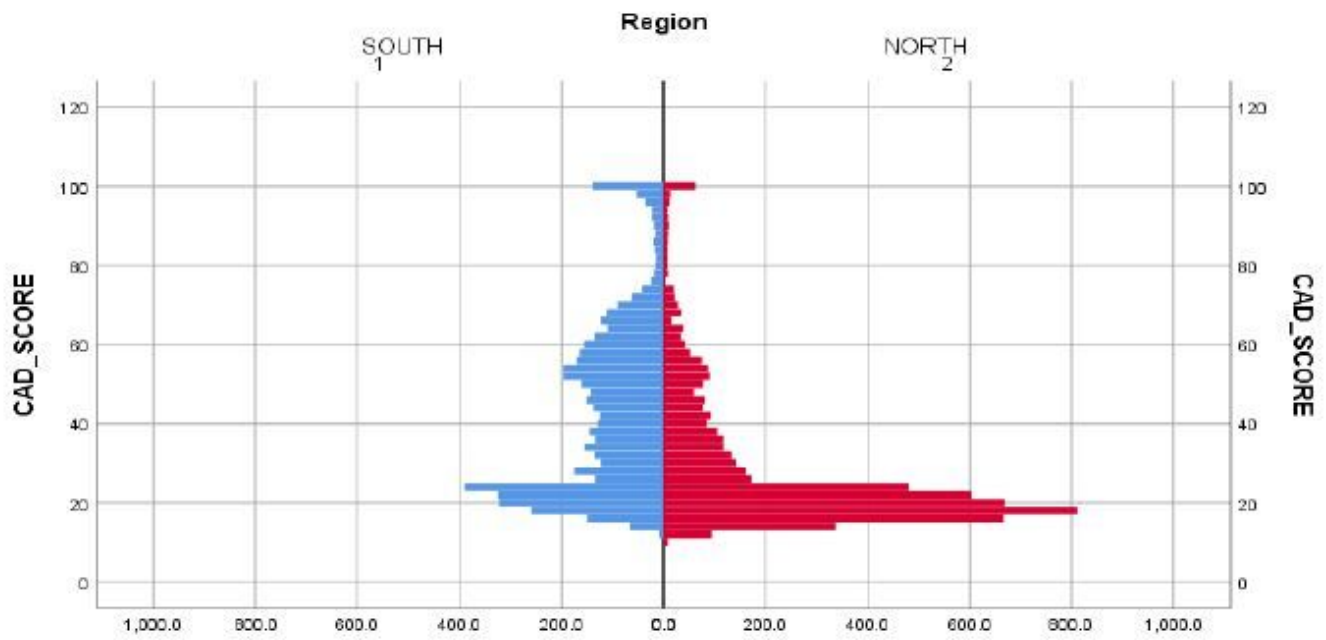


Figure 2

Comparison of CAD4TB distributions by Region in the Pilot Phase (n=11,284)

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